

The background features a collage of military assets: a submarine, a fighter jet, a transport aircraft, a missile cruiser, an aircraft carrier, and a mobile command vehicle. A semi-transparent globe is centered behind the text, with yellow lines representing network connections radiating from a central point to various locations on the globe and connecting the different military assets.

Battlespace Networking Products

Network Services and Mission Applications

FORCEnet Conference

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PMW 780

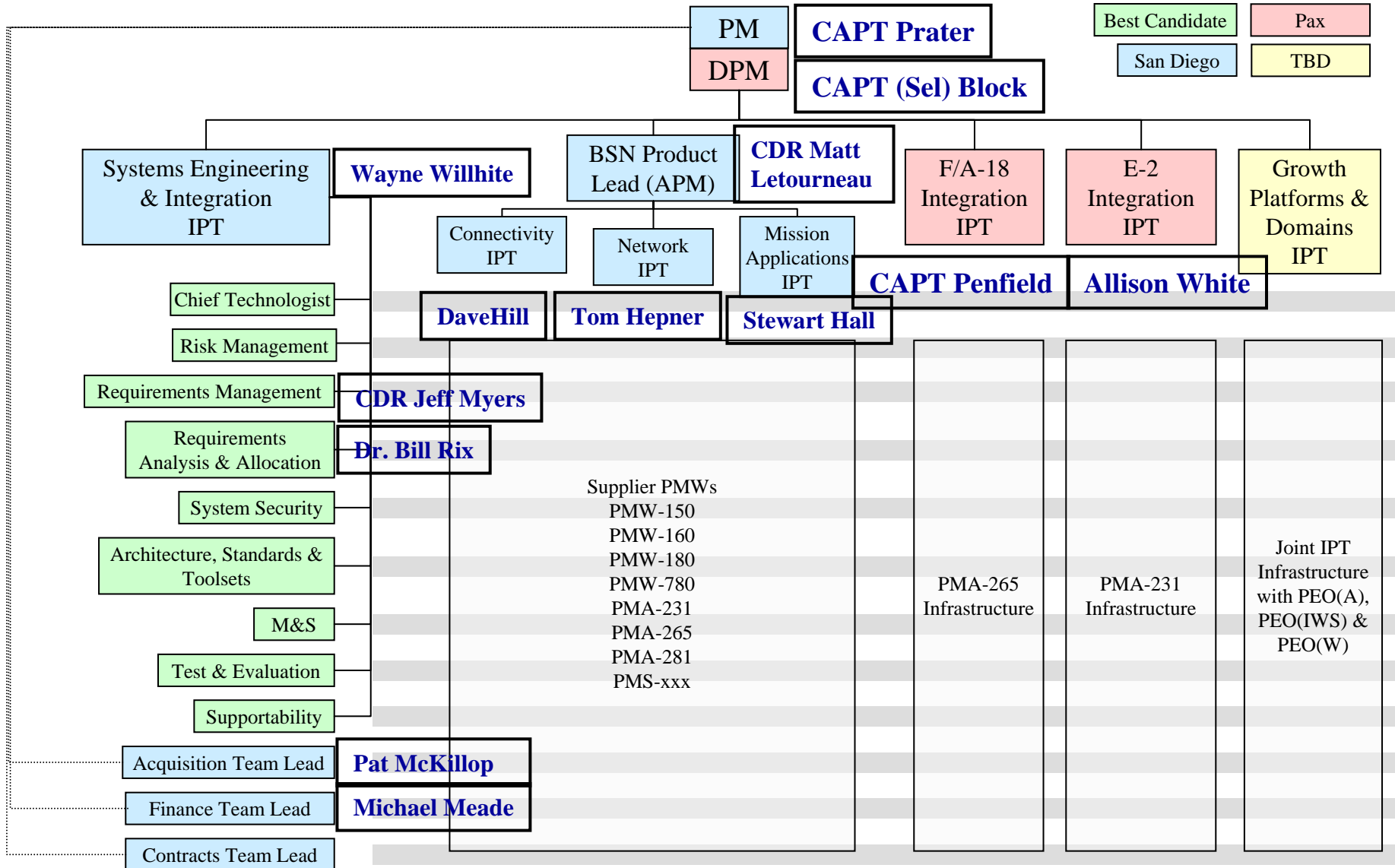
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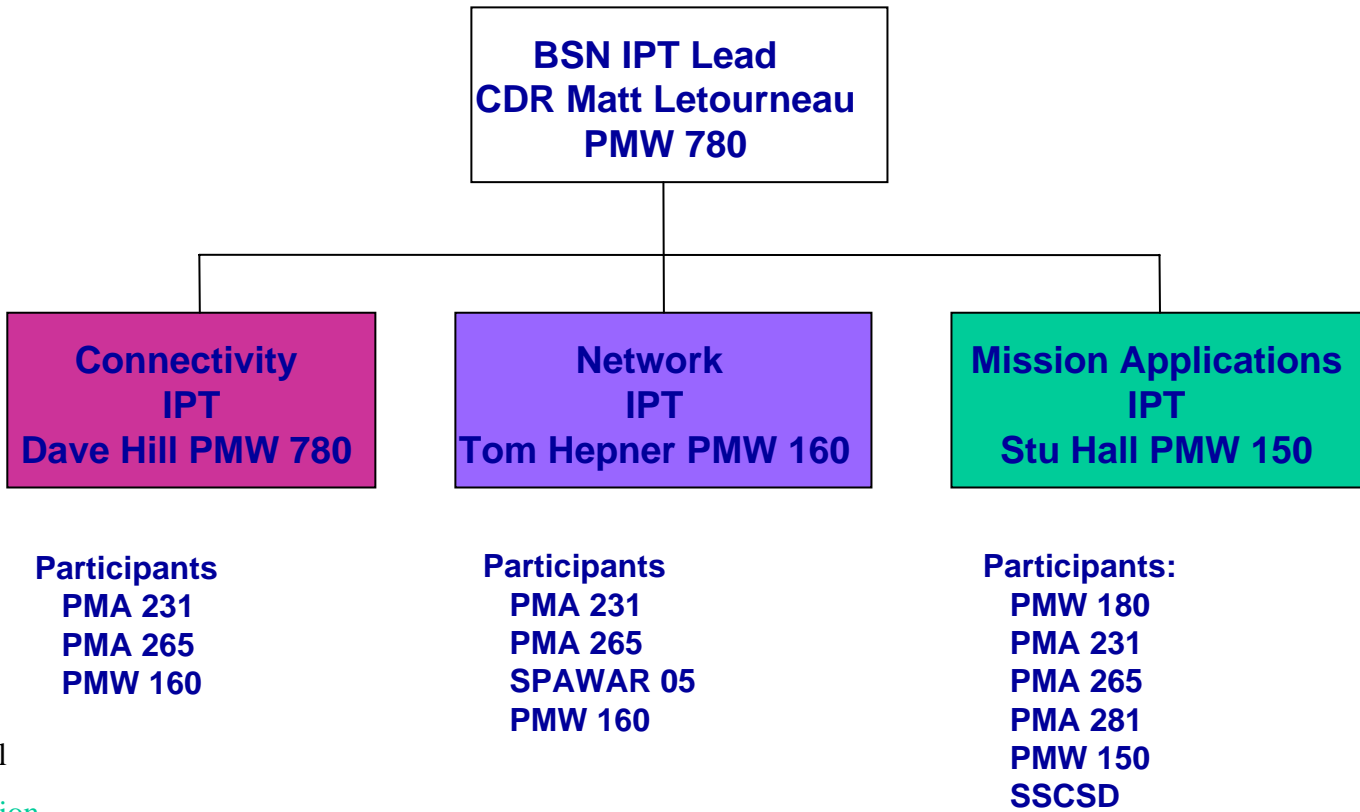
Battlespace Networking Organization





BSN Products

Proposed IPT Organization and Structure



OSI 7 Layer Model

- Layer 7 – Application
- Layer 6 – Presentation
- Layer 5 – Session
- Layer 4 – Transport
- Layer 3 – Network
- Layer 2 – Data link
- Layer 1 - Physical



BSN Candidate Products

Connectivity Products

- MIDS/JTRS
- Ethernet/Fiber/1553
- Airborne Networking Waveform
- Open System Architecture Processor

Network Products

- Network Protocol Engineering
- Network Management
- Network Core Services
- Security – Defense-in-Depth

Mission Applications Products

- Dynamic Mission Planning
- Machine-Machine Targeting Interfaces
- Sensor Integration
- Improved BSA / Composeable FORCEnet



Connectivity IPT Products

- **MIDS - JTRS**
- **Ethernet/Fiber/1553**
- **Airborne Networking Waveform**
 - Key Enabler
- **Open System Architecture Processor**



MIDS JTRS with external PA



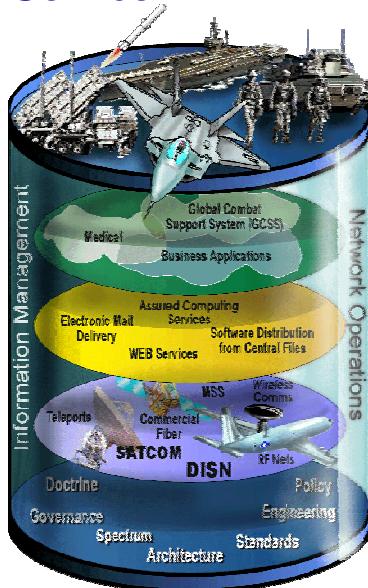
Network IPT BSN Products

- **Network Protocol Engineering**

- MANET
- Integration of MANET and traditional data links
- Efficiencies

- **Network Management**

- Topology Management
 - PTP
 - Broadcast/Multicast
- Quality of Service



- **Network Core Services**

- Publish/Subscribe
- Authentication
- Messaging
- Business Process engineering Language (BPel)
- Mediation
- Discovery
- Identity
- Collaboration
- Security
- Cross Domain Solutions

- **Security – Defense-in-Depth**

- Network
- Application
- Information Assurance
- Electronic Key Management System



Mission Applications IPT Products

- **Dynamic Mission Planning**
 - Adapting Mission planning systems to monitor changes in the battle space allowing automatic re-tasking of missions
 - Adapting airspace planning applications to allow dynamic updates to aircrew
 - JMPS, REDS, TBONE, AODS
- **Machine-Machine Targeting Interfaces**
 - Digital target data interchange between ABC2 and fighter aircraft to permit accurate and rapid engagement
 - RAIDER
- **Sensor Integration**
 - Processing of networked aircraft sensors to provide high precision geolocation of threats and target
 - Take advantage of available airborne sensors to augment tactical collection requirements to support dynamic targeting
 - Correlation and fusion of networked sensors to provide Combat ID of targets
 - HITS, Fighter Sensor Network, DCGS-N, Sensor Fusion
- **Improved Battlespace Situational Awareness**
 - Managed injection of Blue Force picture to ABC2 and fighter aircraft to prevent blue-on-blue.
 - Managed INTEL and COTP products available as needed to ABC2 and fighter aircraft
 - Automation of sensor cueing, sensor re-tasking to improve targeting and BDA timelines
 - JBFSA, JXF, CLIP, Composeable FORCEnet



BSN Product Summary

- Working closely with NSAWC, NETWARCOM, OPNAV, CFFC, and others to determine network services and tactical mission applications desired.
- Many products exist today as PORs.
 - Across multiple SYSCOMs and PEOs
 - Need to research candidate products to completely to determine feasibility for BSN.
- Schedule
 - Initial Waveform Delivery: Mar '08
 - Final Airborne Networking Waveform: FY09
 - Initial Services and Applications Delivery: FY08
 - For lab testing and platform integration